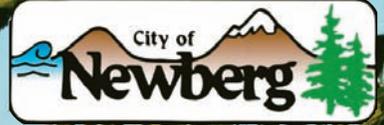


City of Newberg Water Quality Report for 2008



414 East First Street
Newberg, OR 97132
www.ci.newberg.or.us

*Este informe contiene información
muy importante sobre la calidad de
su agua beber. Tradúzcalo o hable
con alguien que lo entienda bien.*

The United States Congress passed the Safe Drinking Water Act in 1974, and reauthorized it in 1986 and 1996. The Environmental Protection Agency and the State of Oregon develop and enforce drinking water regulations to protect the public health. The City of Newberg has several programs that help protect and maintain the high quality of our water. This “multiple layer” approach includes:

Protecting the Source

Preventing pollution is the first priority in protecting our water sources. The City owns the land where the wells and springs are located. These locations are all in largely undeveloped and unthreatened areas. The land adjacent to the wells is leased for agricultural use with restrictions designed to protect the ground water from contamination by pesticides or other agricultural chemicals.

Disinfection and Treatment

Water from the well field is safe to drink without treatment. However, to protect your health, the City’s drinking water is disinfected using Chlorine. Chlorine concentration is measured continuously at the treatment plant and is checked at various points in the system and at the springs weekly. Enough chlorine is added at the head of the plant to provide approximately one part per million (ppm) of residual chlorine after treatment. Water from the well field is relatively high in iron and manganese. Neither poses a health risk, but can cause the water to be discolored and affect the taste. The well field water is filtered to remove iron, manganese and other contaminants and treated with sodium hydroxide to minimize the leaching of lead and copper from household plumbing. Water from the springs is chlorinated but is not filtered or treated in any other manner.

Monitoring the System

The City of Newberg routinely monitors for contaminants in your drinking water according to federal and state laws. Samples are taken from 54 different sites. A selection of these sites are tested each week on a rotating basis throughout the year. All required testing is performed by independent, certified laboratories using EPA approved methods. Process control is performed by City staff. Testing includes





turbidity, conductivity, pH, iron concentration, temperature, coliform bacteria, trihalomethanes, haloacetic acids, nitrates, volatile organic compounds, synthetic organic compounds, arsenic, uranium, radium, and chlorine residual levels. Every three years samples are taken from residences constructed prior to 1985 and tested for lead and copper. Test results are summarized in the Water Quality Data section of this report.

Preventing Contamination

Another key to maintaining good water quality is to effectively manage the water distribution system. Preventing contamination of the water from outside sources is very important. The City requires that backflow prevention devices be installed on any connection to the water system that could present the risk of contaminating the water. The City also routinely flushes the distribution system to remove sediment from the water lines. In 2004 a comprehensive emergency response plan was developed to ensure that in the event of a natural disaster or terrorist attack the citizens of Newberg will continue to have an adequate supply of safe drinking water.

Water Reuse System

The City of Newberg experiences wide variations in water use from wet weather months to dry weather months. Summer use approaches 6 mgd (million gallons day) while winter use is closer to 2 mgd. Irrigation is a substantial portion of the increased water demand during dry months.

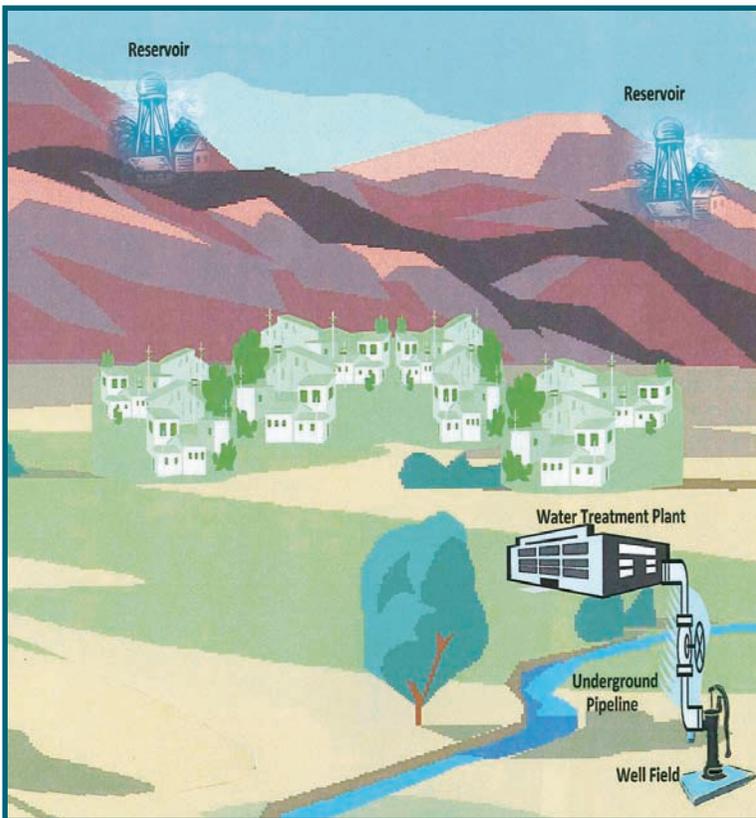
In an effort to lessen dry weather demand and provide major irrigators with a source of water other than the potable water supply, the City of Newberg turned to the latest in wastewater reuse technology. Completed in the fall of 2008, the new Pall Membrane Recycled Water System now provides treated recycled water to Chehalem Park & Recreation's 18 hole Golf Course. This will reduce the use of potable water by an average of 350,000 gallons per day in the dry months. In the future, other irrigators and non potable water users will be able to access this resource. The City can easily expand the Recycled Water System up to 2 million gallons per day. The recycle system reduces demand on the City's potable water supply and encourages local businesses to make conservation practices a part of their business model.

Where Does Our Water Come From?

The City operates two groundwater systems - a well field and a springs system. Our primary source is a sand and gravel aquifer located just south of the Willamette River on property owned by the City of Newberg. This "raw" water is naturally filtered by the aquifer. It is pumped under the river through the new pipeline installed in 2006 to the Water Treatment facility for further treatment. The seven wells at this well field provide Newberg with 94% of its water supply.

The three springs are located north of the City on the slopes of the Chehalem Mountain. Approximately 57 customers are served directly by Snider and Skelton Springs. Another 18 customers are served directly by Oliver Spring. Water that is not completely used by customers on the Oliver Spring line feeds into the North Valley Reservoir. This spring is scheduled for disconnection from the reservoir in 2009 and will become a completely separate system at that time. Atkinson Spring is currently disconnected.

The City produced an average of 2.67 million gallons per day (mgd) of drinking water in 2008. The peak day production was 6.07 million gallons. 94.48% or 2.53 mgd of the total production came from the wellfield.





About Drinking Water

All drinking water, including bottled water, may be expected to contain small amounts of contaminants. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and radioactive material and can pick up substances from the presence of animals or human activity. It is important to remember that the presence of these contaminants does not necessarily pose a health risk. Contaminants that may be present include:

- Microbial contaminants such as viruses and bacteria which may come from wastewater treatment plants, septic systems, livestock operations and wildlife.
- Inorganic contaminants such as salts and metals which can be naturally occurring or result from storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining and farming.
- Pesticides and herbicides which may come from a variety of sources such as agriculture, stormwater runoff and residential use.
- Organic chemicals including synthetic and volatile organics which are byproducts of industrial processes and petroleum production. These can also come from gas stations, urban storm water runoff and septic systems.
- Radioactive contaminants which may be naturally occurring or be the result of mining or oil and gas production.

The Environmental Protection Agency (EPA) has set Maximum Contaminant Levels (MCL), Maximum Contaminant Level Goals (MCLG), or Action Levels (AL) for each regulated contaminant. MCL's are set at very stringent levels. The City's drinking water sources contain no contaminants at or near the MCL or AL. See the Water Quality Data on the last page of this report.

About Lead:

Lead plumbing was banned in 1985. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Newberg is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Frequently asked Questions:

How do I pay my water bill?

Water billing and payments are generated by the Finance Department. You can make your payment at 401 E Third Street, Newberg, Oregon 97132. A new service allows you to pay your water bill online! Log on to set up your online account at www.ci.newberg.or.us or call 503-537-1205.

Does Newberg's water supply contain Fluoride?

The City of Newberg does not add Fluoride to the water however there are trace amounts that occur naturally in the water supply.

Is Newberg's water hard or soft?

Our water supply is considered moderately hard—measured at 56 milligrams per liter (ppm).

Is there Chlorine in my Drinking Water?

The City is required to maintain a “chlorine residual” in the water. This is to protect the water from microbial contamination as it travels from the Treatment Facility to your home. There is approximately 1 milligram per liter of chlorine in a consumer's water.

How can I participate in decisions about Newberg's water system?

A Citizen Rate Review Committee meets periodically to review water rates. The committee considers factors such as current and future water demand, operation and maintenance costs, needed improvements, reserve funds, and other factors when recommending water rates. The committee then submits a report to the City Council. The Council then determines the rates for the water system. If you would like to be involved, contact the Finance Department at 503-538-9425.





Hoover-Minthorn House



Rotary Centennial Park



North College Street

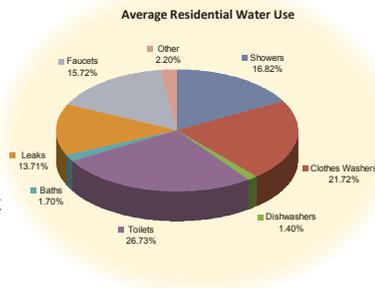
Water Awareness. Conservation... Why does it matter?

Water is a valuable resource. Of all the water on Earth, only about 2.8% is fresh water available for us to drink. So protecting and understanding your water is important to you and your family.

Conservation Tips:

TOILETS:

- Replace your toilet with a high efficiency unit
- Install a tank displacement device
- Don't use your toilet as a wastebasket
- Check for leaks once a year



FAUCETS:

- Install low-flow faucet aerators
- Fix leaks
- Shorten shower time by 5 minutes

KITCHEN & LAUNDRY:

- Keep chilled water in your refrigerator instead of running the faucet
- Defrost food in the refrigerator instead of running water over it
- Run the dishwasher only when it's fully loaded
- Consider using front load clothes washers

For information about water efficient appliances, visit:

www.energystar.gov

Outdoors:

Water used for landscaping is typically about 30-40 percent of a household's water use during the summer months. Make every drop count!

- Deep-soak your lawn about 1 inch weekly and avoid runoff.
- Water during the cool of the day: late evening, early morning.
- Set a kitchen timer or invest in a sprinkler timer. Outdoor faucets flow 300 gallons per hour.
- If it doesn't grow, don't water it. Don't water any paved areas and avoid watering on windy days.
- Install drip irrigation systems.
- Trim grass at a higher mower setting, to provide extra shade to roots.
- Lay mulch around trees and plants.
- Weeds are water thieves, robbing your plants of water.
- Use a broom, not a hose, to clean driveways and sidewalks.
- Use a bucket when you wash your car and don't let the water run.
- Cover your pool to help prevent evaporation.

For information on native plants that require less water, visit the Native Plant Society of Oregon at: www.npsoregon.org or www.oregon.native-plants.com

Backflow Devices – Preventing Contamination in the Drinking Water

What's a Backflow Device?

Do you have a backflow device? Not sure? Most residents don't realize that the sprinkler system or water fountain in their yard or the fire system in their house has a backflow prevention device on it. This device prevents water that has entered the fountain or sprinklers from accidentally flowing back into the drinking water lines.

The Program

As required by Oregon Statute and City Code, backflow devices must be tested annually to ensure they are functioning. The city will mail a letter to each residence notifying that it's time to test the backflow devices. Tests are conducted by Certified Testers hired by the property owner. Each property owner may choose which tester they want to hire. The tester will check the device, make repairs as authorized by the owner and send the City a report showing the test was completed. Even Home Associations must have an annual backflow device inspection each year.

If you have a new device installed you or your contractor must obtain a permit from the City Building Department. Devices must be installed and tested by a licensed contractor. Then the City will inspect the new device for final approval. For permit questions contact the Building Department at 503-537-1209.

Not sure if you have a device?

Call the Water Treatment plant at 503-537-1239 and we will help you find the device on your property. Need a list of certified testers? We can mail you a list or you can visit the City website for a link to the State of Oregon's website.



NEWGROW Compost

The City of Newberg offers an excellent product that is a favorite of landscapers all over the region. NEWGROW Compost is available all year to the public!

NEWGROW Compost exceeds all EPA and DEQ standards. It is low in metals, free of pathogenic organisms, and will not attract rats, flies, or other pests. **There are no restrictions on its use.** It is both a low-grade fertilizer and an excellent soil amendment. NEWGROW may be used without restriction on outdoor ornamental plants, as a potting soil amendment, on lawns and trees, and on nursery plots.

Call ahead to check availability: 503-537-1252.



Hours of Sales:

Weekdays

8:30 am - 3:30 pm

Closed Daily

12 noon to 1:00 pm

Payment Accepted:

Cash or Check

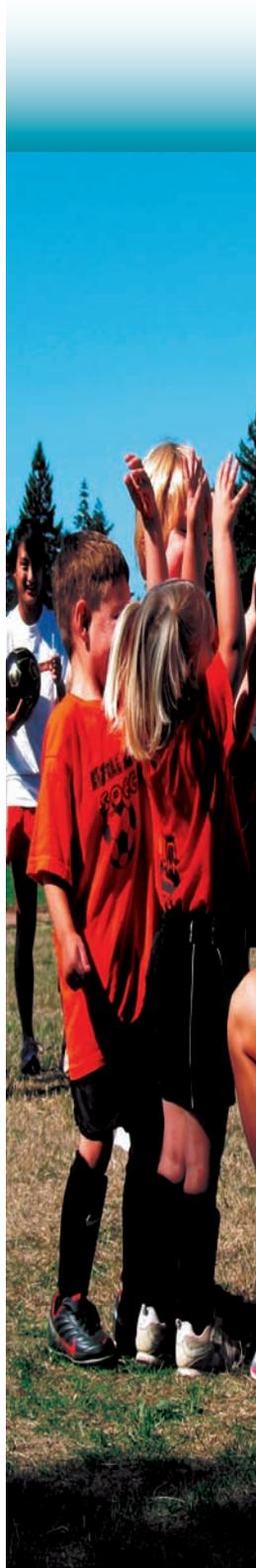


Just for Kids: Color and Consider



Make Every Drop Count!

Only water plants that really need extra water and only at night to prevent evaporation. Don't water the sidewalk or street. Check for leaks. Look around your house and see where you can stop water waste so everyone can stay cool this summer!





For Kids!

Think about this. In one kitchen, in one apartment, in one building, on one block, a boy goes to the faucet and fills a glass with water. At the same moment, thousands of people in Newberg are also getting water from the same pipes.

1. How is it possible?
2. Where does it all come from?
3. How come it doesn't run out?

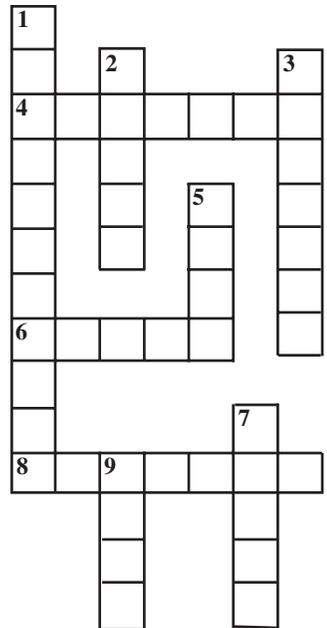
Crossword Fun

DOWN

- 1 Process where water turns to gas and rises into the air.
- 2 A substance to use in gardens to reduce evaporation.
- 3 A long dry period of weather causes this.
- 5 Water travels through this to your home.
- 7 What you should use to clean the sidewalk.
- 9 A pipe in the ground that is used to draw water from an aquifer.

ACROSS

- 4 An underground "pocket" of water.
- 6 The number of gallons of water used brushing teeth.
- 8 The city you live in.



Kids! Want to learn more? Ask an adult to help you visit these great websites!

www.epa.gov/safewater/kids, www.groundwater.org,
or www.conserveh2o.org. Or visit your Library!

Are there special health concerns I should know about?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants, can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC (Centers For Disease Control) guidelines on appropriate means to lessen the risk of infections by cryptosporidium and other microbiological contaminants are available from the EPA Safe Drinking Water Hotline 1-800-426-4791.

The City of Newberg's drinking water continues to meet or exceed all federal and state requirements. We are committed to providing you with the highest quality water possible. If you have questions or would like information that is not in this report, contact the Water Treatment Supervisor at 503-537-1289. Reports from previous years are available at City Hall, 414 E. First St., Newberg, Oregon 97132.

Testing

Total Coliform Bacteria

Total coliform bacteria are naturally occurring and not generally a health risk, but their presence is an indication of possible contamination of the water by harmful bacteria or other microorganisms. Any positive sample requires retesting at the location of the sample, and at two locations within five service connections upstream and downstream of the positive sample site. Of 328 tests, 327 (99.7%) were negative for total coliform in 2008.

Chlorine

The City is required to maintain a chlorine residual in the distribution system to provide post-treatment protection from microbial contamination. Chlorine residual is monitored continuously at the Water Treatment Plant. Weekly testing is done at each spring and in the distribution system to ensure that the water is adequately disinfected.

Turbidity

Turbidity is a measure of the cloudiness of water. Chlorination is less effective in inactivating bacteria in turbid waters. If turbidity exceeds the 5 NTU MCL, boil water notices are issued to affected residences.





Nitrates

Testing is required on each source (the well field and each spring) annually.

Trihalomethanes and Haloacetic Acids

Testing is done annually on water from the distribution system. Trihalomethanes and haloacetic acids are byproducts of disinfection with chlorine.

Inorganic Compounds

Testing is done for 18 inorganic compounds on each water source every nine years. The City's most recent testing for inorganic compounds was performed in October of 2004. At that time, a very low level of copper (less than 8% of the allowable level) was detected. All other inorganic compound testing produced no detectable results.

Arsenic

Arsenic testing is performed every three years. The most recent testing in May of 2008 found no detectable levels of arsenic.

Organic Compounds

Testing is done for 21 volatile organic compounds (VOCs) and 42 synthetic organic compounds (SOCs) every three years. VOCs include petroleum products and solvents. SOCs include pesticides, PCBs, and other man-made organic chemicals. No VOCs or SOCs were detected in Newberg's drinking water in testing done in 2004 and 2007 (for SOCs) and 2008 (for VOCs).

Lead and Copper

EPA requires testing at the customer's tap in homes built prior to 1985 which are more likely to have elevated lead and copper levels. In 1998, the City began adding sodium hydroxide (NaOH) to its finished water supply to raise the pH of the water and minimize the leaching of lead and copper from household plumbing. From 1998 until 2003, the City tested annually for lead and copper levels. Due to the successful outcome of this testing, the EPA now requires the City to only test for lead and copper every three years.

Radioactive Contaminants

Source waters have been tested for gross alpha emissions every four years. New rules now also require testing for uranium and radium. Testing frequency is based on the amount of radiation detected in previous tests.

Unregulated Contaminants

EPA required testing for 11 unregulated contaminants twice between 2002 and 2005. Testing done on samples taken in December 2002 and June 2003 did not detect any of these contaminants in Newberg's drinking water. The next scheduled tests will be performed in 2009.

City of Newberg Water Quality Data for the Year 2008

The following tables show the results of the City of Newberg's water quality analyses. All regulated contaminants that have been detected, even in minute amounts, are shown in the table. The table contains the name of the substance, the water source, the amount detected, the maximum level allowed by regulation (MCL or AL), the ideal goal for public health (MCLG), and the likely source of the substance.

<i>Substance</i>	<i>Water Source</i>	<i>Level</i>	<i>MCL</i>	<i>MCLG</i>	<i>Units</i>	<i>Date Tested</i>	<i>Major Sources</i>
<i>Nitrate</i>	Wellfield	ND	10	10	ppm	8/2008	Runoff from fertilizer use, erosion of natural deposits, septic systems, wastewater discharges
	Oliver Spring	1.8					
	Snider Spring	2.1					
	Skelton Spring	1.9					
	Atkinson Spring	1.0					
<i>TTHM¹</i>	Distribution System	40.0	80	-	ppb	8/2008	Byproduct of disinfection with chlorine
<i>HAA5¹</i>	Distribution System	6.4	60	-	ppb	8/2008	Byproduct of disinfection with chlorine
<i>Copper²</i>	Wellfield	.014	AL=1.3	1.3	ppm	2/2002	Erosion of natural deposits
	Skelton Spring	.102					
	Oliver Spring	.007					
	Snider Spring	.010					
	Dist. System	ND					
<i>Turbidity³</i>	Oliver Spring	1.15	5	-	NTU	2008	Soil runoff
	Snider Spring	3.71					
	Skelton Spring	8.15					
	Atkinson Spring	2.91					
<i>Radium 226/228</i>	Oliver Spring	1.835	5	0	pCi/L	11/2003	Erosion of natural deposits
	Snider Spring	0.829					
	Skelton Spring	1.86					
	Atkinson Spring	1.75					
	Wellfield	ND					
<i>Uranium</i>	Oliver Spring	.026	30	0.0	ppb	11/2003	Erosion of natural deposits
	Snider Spring	.024					
	Skelton Spring	.033					
	Atkinson Spring	.061					
	Wellfield	ND					

<i>Substance</i>	<i>Date Tested</i>	<i>90th Percentile⁴ Level</i>	<i>Goal</i>	<i>Units</i>	<i>Homes Exceeding AL</i>	<i>Major Sources</i>	
<i>Lead⁵</i>	9/2006	13	15	0.0	ppb	6.7%	Corrosion of household plumbing
<i>Copper⁵</i>	9/2006	0.35	1.3	1.3	ppm	0%	Corrosion of household plumbing



Abbreviations

ppm	= parts per million or milligrams per liter
ppb	= parts per billion or micrograms per liter
pCi/L	= picocuries per liter
mgd	= million gallons per day
TTHM	= total trihalomethanes
HAA5	= haloacetic acids
NTU	= nephelometric turbidity units
MCL	= Maximum Contaminant Level (The highest level that is allowed in drinking water. The MCL is set as close to the MCLG as feasible using the best available treatment technology.)
MCLG	= Maximum Contaminant Level Goal (The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.)
AL	= Action Level (The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.)
ND	= None Detected

Footnotes

- ¹ Values are maximum recorded of all sources sampled during 2008.
- ² Measured at the source (well field and springs).
- ³ Values shown are the highest recorded during the year. Skelton Spring exceeded 5 NTU for four days in January.
- ⁴ The 90th percentile value is the level that 90% of the homes tested were at or below. If the 90th percentile value exceeds the AL, water suppliers must take steps to reduce lead and/or copper levels.
- ⁵ Measured at residential taps

Sodium

Although there is no MCL for sodium, the level of sodium in the City's water may be of concern to individuals on sodium-restricted diets. Sodium levels of water from the springs ranged from 5.3 to 6.3 ppm in samples taken in 2002. Water produced by the treatment plant contained 19.4 to 24.8 ppm in samples taken in 2008. If you are concerned about the levels of sodium in your drinking water, please consult your physician.

Chlorine

EPA has recommended a maximum residual disinfectant level goal of 4.0 ppm. Maximum recorded chlorine residuals in 2008 were 1.62 ppm at the Water Treatment Plant, 2.20 ppm at Skelton Springs, 1.84 ppm at Oliver Spring, and 2.20 ppm at Snider Spring. (Atkinson Spring was not used in 2008.) The maximum chlorine residual recorded in the well field supplied distribution system in 2008 was 1.25 ppm.



Mixed Sources

Product group from well-managed forests, controlled sources and recycled wood or fibre

www.fsc.org Cert no. SCS-COC-001717
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City of Newberg

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Newberg, OR 97132

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